

**WORK PLAN**  
**FOR**  
**WORK ASSIGNMENT NO. SERAS-130**  
**AMENDMENT NO. 3**  
**CABO ROJO**  
**April 4, 2013**

**AMENDED WORK PLAN  
CABO ROJO**

**Prepared for  
UNITED STATES ENVIRONMENTAL PROTECTION AGENCY (EPA)/  
ENVIRONMENTAL RESPONSE TEAM (ERT)**

**Date:** April 4, 2013  
**Contract No:** EP-W-09-031  
**Assignment No.:** SERAS-130.3

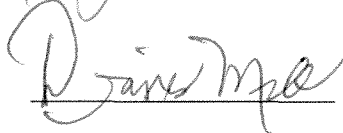
**Approval:**

**Task Leader**



**Date:** 4/3/13

**Program Manager**



**Date:** 4/9/13

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<b>Work Assignment Number:</b>	<b>SERAS-130.3</b>
<b>Work Assignment Title:</b>	<b>Cabo Rojo, Puerto Rico</b>
<b>Work Assignment Manager:</b>	<b>Jeff Catanzarita</b>
<b>Lockheed Martin SERAS Task Leader:</b>	<b>Phil Solinski</b>
<b>Duration:</b>	<b>April 6, 2011 through September 22, 2014</b>
<b>Contract Number:</b>	<b>EP-W-09-031</b>
<b>Site ID:</b>	<b>A244</b>

## INTRODUCTION

**Purpose.** *Under the original work assignment (WA), Lockheed Martin (LM) Scientific, Engineering, Response & Analytical Services (SERAS) personnel provided technical support to the Environmental Protection Agency/Environmental Response Team (EPA/ERT) and EPA Region 2 to conduct a preliminary remedial investigation (RI) in the town of Cabo Rojo, Puerto Rico (PR). Under WA amendments 1 and 2, SERAS personnel provided assistance to the ERT and Region 2 to perform a high priority vapor intrusion (VI) investigation in the vicinity of the Cabo Rojo site (Site). Under amendment 3, SERAS personnel will conduct additional VI investigation sampling in structures where elevated soil gas levels were observed. SERAS personnel may collect sub-slab soil gas and/or indoor air samples in other structures which may pose a threat to human health. Work will be carried out by SERAS personnel in consultation with the ERT Work Assignment Manager (WAM).*

## TECHNICAL APPROACH

Under the original WA and amendments 1 and 2, 8 tasks were identified. Activities in Tasks 1, 5, 7, 8 and 9 will continue.

**Task 1: Project Administration.** The SERAS Task Leader (TL) will schedule, organize and manage the project. An amended Uniform Federal Policy-Quality Assurance Project Plan (UFP-QAPP) will be prepared and submitted; a Health and Safety Plan (HASP) modification will be prepared, reviewed and approved prior to field work. An outside laboratory will be procured to provide certified low flow orifices and SUMMA canisters and perform EPA Method TO-15 volatile organic compound (VOC) analysis for up to 20 total soil gas and air samples.

**Task 5: Chemical Analyses.** An outside laboratory will be procured to provide certified low flow orifices and SUMMA canisters and perform trace level (30 parts per billion by volume, ppbv) VOC analysis for sub-slab soil gas and indoor air samples using EPA Method Toxic Organic (TO-15), *Determination of Volatile Organic Compounds (VOCs) in Air Collected in Specially-Prepared Canisters and Analyzed by Gas Chromatography/Mass Spectrometry (GC/MS)*. Analysis results will be reported in both micrograms per cubic meter ( $\Phi\text{g}/\text{m}^3$ ) and ppbv for 36 target compounds.

**Task 7: Reports.** The outside lab will provide preliminary VOC analysis results for soil gas and air samples within 10 business days of receipt of the last sample. Analytical data will be reviewed and validated; an analytical report will be prepared and submitted. A trip report detailing the tasks and results of the activities performed under amendment 3 will be prepared and submitted. Environmental data will be imported into the site Scribe<sup>7</sup> database which will be posted on the ERT-Information Management System (IMS) website along with other relevant project information.

**Task 8: Sub-Slab Soil Gas Sampling.** SERAS personnel will collect 24-hour soil gas samples from sub-slab soil gas well using SUMMA<sup>7</sup> canisters. Each SUMMA<sup>7</sup> canister will be equipped with a restrictive orifice set at a constant flow rate to collect between 4- and 5-L of sample during the 24-hour sampling period. Samples will be analyzed as outlined in Task 5.

**Task 9: Indoor and Ambient Air Sampling.** Concurrent with sub-slab soil gas sampling, SERAS personnel will collect 24-hour samples from indoor air and ambient air locations. Where possible, each residence or building will have all lifestyle substances (possible chemical sources) removed and will be closed for 24 hours prior to the sampling event. Any chemical sources that remain in the buildings during the sampling event will be documented. The sampling locations will be determined by the WAM onsite. A collocated sample will be collected for every 10 indoor air samples or a minimum of one per day.

Air samples will be collected using SUMMA<sup>7</sup> canisters equipped with a restrictive orifice set at a constant flow rate to collect between 4- and 5-L of sample during the 24-hour sampling period. Air samples will be analyzed as outlined in Task 5.

#### **AMENDED STAFFING PLAN AND SCHEDULE**

Amendment 3 was received on March 27, 2013. This amended WP was initiated within 20 days after receiving WA amendment 2. The project will be completed by September 22, 2014.

The following SERAS personnel will provide support for amendment 3:

<u>Personnel</u>	<u>Responsibility</u>	<u>Level</u>
Air Response Chemist	TL/Project Management; Deliverable Preparation	****
	Soil Gas/Air Sampling	
Environmental Scientist	Soil Gas/Air Sampling	***
Environmental Scientist	Soil Gas/Air Sampling	**
Environmental Technician	Assemble, Check, Pack/Unpack and Store Air Sampling Equipment and Accessories	#
Property Coordinator	Coordinate and Monitor Outside Lab Activities	***
QA/QC Chemist	Data Review and Validation	***
Report Writer	Analytical Report/EDD Preparation	***
QA/QC Officer	Deliverable Review; Validation Oversight	****
Program Manager	Deliverable Review; Project Oversight	****
Health and Safety Officer	HASP Review/PPE Selection; H&S Oversight	****
AutoCAD/GIS	Figure/Map Preparation	***
Info Tech/Data Reduction	Figure/Map Preparation	**
Business Manager	TCE Preparation/Financial Oversight	***
Clerical	Deliverable Preparation/Archival	#
Administrative Support	Logistical and Administrative Support	**
Purchasing/Procurement	Purchase Materials and Services	***

Additional SERAS technical and/or administrative personnel may work on this project as needed.

**Schedule of Activities.** The anticipated schedule of activities is as follows:

<u>Deliverable ID</u>	<u>Item</u>	<u>Date</u>
130-023	UFP-QAPP, Amendment 3	March 25, 2013
130-024	HASP Modification 3	March 25, 2013
130-025	WP, Amendment 3	April 16, 2013
NA	Field Activities- Amendment 3	Week of March 25, 2013
130-026	Preliminary Analysis Results	10 BD after sample receipt

NA	Analytical Data Package	5 BD after prelims
130-027	Analytical Report	10 BD after data package receipt
130-028	Draft Trip Report	20 BD after receipt of last sample
130-029	Final Trip Report	5 BD after receipt of WAM's comments

All project deliverable dates are estimated based on the information available at the time of amended WP completion. New information, additional tasks and events outside SERAS control may result in revisions to these dates.

## **LEVEL OF EFFORT AND COST PROJECTIONS**

The estimated cost (including level of effort (LOE hours), travel, materials, equipment and analytical services) to complete this project through September 22, 2014 is given in the attached cost summary sheet. Photo-documentation, computer graphics and support, report preparation and purchasing support will be required to accomplish WA objectives. LOE for these activities are included in the attached cost summary.

**Purchased Services.** Under amendment 3, an outside laboratory will provided certified low flow orifices and perform Method TO-15 VOC analysis for ~ 20 soil gas/air samples at an estimated cost of 4,000.

**Travel Assumptions.** Travel Assumptions are as follows for amendment 3:

Number of trips from Edison NJ to Cabo Rojo, PR	1
Number of days per trip	3
Number of personnel per trip	4